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**TO:**

**Name:** Mail Stop APPEAL BRIEF-Patents  
Group Art Unit 3738/Examiner Bruce Snow

**Firm:** U.S. Patent & Trademark Office

**Fax No.:** 571-273-8300

**Subject:** U.S. Patent Application No. 10/669,287  
Gary Karlin Michelson

**Filed:** September 24, 2003

**EXPANDABLE PUSH-IN ARCUATE INTERBODY  
SPINAL FUSION IMPLANT WITH TAPERED  
CONFIGURATION DURING INSERTION**

**Attorney Docket No.** 101.0092-02000

**Customer No.** 22882

**Confirmation No.:** 6591

**FROM:**

**Name:** Thomas H. Martin, Esq.

**Phone No.:** 330-877-2277

**No. of Pages (including this):** 9

**Date:** December 4, 2007

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FORM PTO-1083

**DEC 04 2007**Attorney Docket No.: 101.0092-02000  
Customer No. 22882**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

Gary Karlin Michelson

Serial No: 10/669,287

Filed: September 24, 2003

For: **EXPANDABLE PUSH-IN ARCUATE  
INTERBODY SPINAL FUSION  
IMPLANT WITH TAPERED  
CONFIGURATION DURING  
INSERTION**

Confirmation No.: 6591

Art Unit: 3738

Examiner: Bruce Edward Snow

Mail Stop APPEAL BRIEF-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Transmitted herewith is a Reply Brief in response to the Examiner's Answer dated November 2, 2007 in the above-identified application.

- ☒ No additional fee is required.
- ☐ Applicant hereby requests a \*\*\* -month extension of time to respond to the above office action.
- ☐ The total amount of \$\*\*\* to cover the above fees is to be charged to Deposit Account No. 50-3726.
- ☒ The Commissioner is hereby authorized to charge any deficiencies of fees associated with this communication or credit any overpayment to Deposit Account No. 50-3726. **A copy of this sheet is enclosed.**
- ☒ Any filing fees under 37 C.F.R. § 1.16 for the presentation of extra claims
- ☒ Any patent application processing fees under 37 C.F.R. § 1.17

Respectfully submitted,

MARTIN &amp; FERRARO, LLP

Date: December 4, 2007

By: 

Thomas H. Martin

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FORM PTO-1083

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Customer No. 22882**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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Respectfully submitted,

MARTIN &amp; FERRARO, LLP

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DEC 04 2007

PATENT  
Attorney Docket No. 101.0092-02000  
Customer No. 22882

## APPEAL TO THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	)	Confirmation No.: 6591
Gary Karlin Michelson	)	
Serial No.: 10/669,287	)	Group Art Unit: 3738
Filed: September 24, 2003	)	Examiner: Bruce Edward Snow
For: EXPANDABLE PUSH-IN ARCUATE	)	
INTERBODY SPINAL FUSION	)	
IMPLANT WITH TAPERED	)	
CONFIGURATION DURING	)	
INSERTION	)	

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**REPLY BRIEF**

Appellant submits the following reply to the Examiner's Answer dated November 02, 2007 ("Answer"). Please note that Applicant inadvertently referenced Fig. 11 on page of 5, line 20, of Applicant's Corrected Appeal Brief dated August 16, 2007. Fig. 3, rather than Fig. 11, should have been referenced instead.

**I. Introduction**

In the Answer, the Examiner responds to Appellant's Appeal Brief dated April 12, 2007 and Corrected Appeal Brief dated August 16, 2007 ("Appeal Brief") and does not rebut the arguments presented by Appellant. Appellant addresses the Examiner's Answer in the order that the objections and rejections were presented in the Answer and by using the section/sub-section numbering utilized in the Appeal Brief.

**II. Argument****A. Section I of the Appeal Brief**

The specification and drawings as filed illustrates the inventor was in possession of an implant, as recited in independent claim 1, with upper and lower members having

Reply Brief 12-4-07.doc

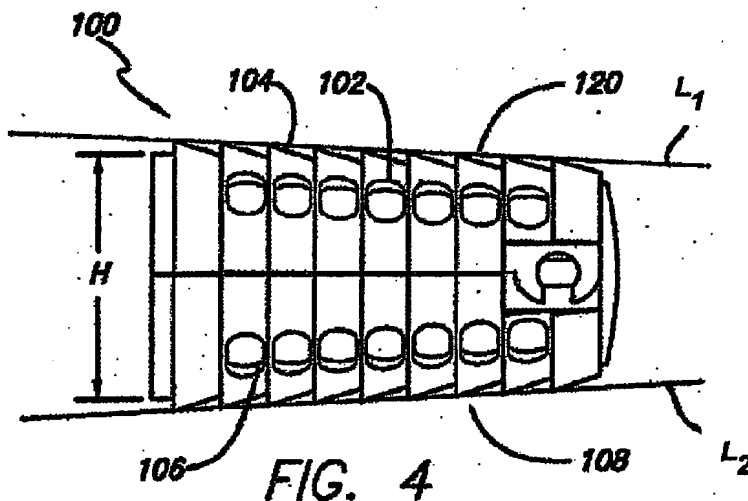
Application No. 10/669,287  
Appellant's Reply dated November 12, 2007  
Reply to Examiner's Answer of November 02, 2007

arcuate portions that in a first position having a collapsed implant height are angled to one another over "a majority" of the length of the implant.

In the Response to Argument section of the Answer, the Examiner indicates that "Applicant's specification provides support for a 'substantial portion of the length' whereas claim 1 claims 'over a majority of the length.'" In furtherance of the rejection of independent claim 1 under 35 U.S.C. § 112, first paragraph, the Examiner contends both that "Applicant is arbitrarily defining a narrower range within a larger range which is new matter," and that "it is also reasonable that the supported range (substantial) does not include the new larger range (majority) which too is new matter." However, in arguing against the recitations of independent claim 1, the Examiner focuses only on Applicant's specification. The Examiner ignores support found for the recitations of independent claim 1 in Applicant's drawings. As discussed below, support for the recitations of independent claim 1 is evident upon review of both Applicant's specification and drawings.

The specification indicates that the arcuate portions of the upper and lower members in a first position having a collapsed implant height can be "angled to one another over a substantial portion of the length of the implant". (Specification, page 5, lines 25-30). Furthermore, Applicant's drawings depicts the relationship between the arcuate portions of the upper and lower members. With reference to Figs. 4, 6, 7, 12A and 12B generally, and in particular with reference to Fig. 4 shown below, Applicant depicts the implant 100 as having an upper member 102 with an upper arcuate portion 104 and a lower member 106 with a lower arcuate portion 108. As shown in Fig. 4, the upper and lower arcuate portions 104, 108 in a first position are angled to one another along a majority of the longitudinal length of the implant 100. Additional lines L<sub>1</sub>, L<sub>2</sub> have been added to Fig. 4 to illustrate the angle of the upper and lower arcuate portions 104, 108, respectively, relative to one another in a first position.

Application No. 10/669,287  
Appellant's Reply dated November 12, 2007  
Reply to Examiner's Answer of November 02, 2007



When considering the specification in light of drawings, in particular with reference to Fig. 4, Applicant submits that support for the recitations of independent claims 1 is apparent. Accordingly, contrary to the Examiner's rejection of claims 1-96 under 35 U.S.C. § 112, first paragraph, there is support for at least one embodiment of the push-in interbody spinal fusion Implant of the present invention having an upper member having a portion being at least in part arcuate and a lower member having a portion being at least in part arcuate with "said arcuate portions of said upper and lower members in the first position being angled to one another over a majority of the length of said implant," as recited in independent claim 1.

**B. Section II of the Appeal Brief**

The present invention is not obvious under 35 U.S.C. § 103(a) in light of U.S. Patent No. 6,117,174 to Nolan ("Nolan"), U.S. Patent No. 5,785,710 to Michelson ("Michelson '710"), or a proper combination thereof.

Application No. 10/669,287  
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Regarding Nolan, the Examiner indicates that "Applicant is very narrowly and incorrectly interpreting 'substantially' to mean the upper and lower members have to be parallel." According to the Examiner, "the very next line of Nolan reads, '[a]lternatively, the profile can be completely cylindrical,'" and "this clearly implies 'substantially cylindrical profile' includes the upper and lower members being non-parallel." However, the Examiner's contentions regarding Nolan are contrary to the teachings thereof.

In actuality, Nolan teaches an implant (10) that, in an unexpanded first position during insertion, "has a substantially cylindrical profile, which means a cylindrical profile except for the flats 35." (Nolan, column 6, lines 3-6). As shown in Figs. 3 and 4, Nolan teaches that the implant (10) includes an upper curved surface (32) and a lower curved surface (34). Furthermore, Nolan teaches that the flats (35) are truncated sides of the implant (10) extending between the upper and lower curved surfaces (32, 34). Accordingly, when Nolan indicates that "[a]lternatively, the profile can be completely cylindrical," Nolan teaches that the implant (10) can be formed without the flats (35). Contrary to the Examiner's contentions, however, either with or without the flats (35), the upper and lower curved surfaces (32, 34), as shown in Fig. 3 of Nolan, are parallel with respect to one another in a first position during insertion. Hence, unlike independent claim 1, Nolan does not teach or suggest an Implant having upper and lower members having arcuate portions that in a first position having a collapsed implant height are angled to one another over a majority of the length of the implant.

Furthermore, the Examiner indicates that "Nolan teaches that the implant has a first insertion position wherein the width 26 of the first end 22 can be different than the width 28 of the second end 24." In doing so, the Examiner relies on Fig. 3 of Nolan. As discussed above, Fig. 3 of Nolan shows that the upper and lower curved surfaces (32, 34) are parallel with respect to the one another during insertion. The Examiner also relies on column 2, lines 26-33, and column 4, lines 21-23 of Nolan which indicate that the width of the implant (10) at its extreme ends may or may not be equal. However,

Application No. 10/669,287  
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indicating the width of the implant (10) at its extreme ends may or may not be equal, does not support a conclusion that the implant (10) includes portions that would be angled over the majority of its length in an unexpanded first position. In fact, such a reading of Nolan would be contrary to the teachings thereof. In detailing the limitations of previous implants, Nolan teaches that frusto-conical shaped implants may be undesirable. According to Nolan, "although in theory these implants may restore the curvature of the spine, they are difficult to install since special reamers may be needed to provide a tapered hole or a cylindrical hole must be modified by the implant which could put undue stress on the adjacent vertebrae." (Nolan, column 1, lines 38-42). Moreover, Nolan indicates "the present invention...is easier to install than tapered implants." (Nolan, column 7, lines 39-41). Therefore, unlike independent claim 1, Nolan does not teach or suggest an implant having upper and lower members having arcuate portions that in a first position having a collapsed implant height are angled to one another over a majority of the length of the implant.

Given the above-discussed teachings of Nolan, Applicant submits that neither Nolan nor Michelson '710, whether alone or in proper combination, teach or suggest an implant with upper and lower members having arcuate portions that in a first position having a collapsed implant height are angled to one another over a majority of the length of the implant as recited in independent claim 1. Accordingly, Applicant submits that the rejection of claims 1-72, 74-76, and 84-87 under 35 U.S.C. § 103(a) as being unpatentable over Nolan in view of Michelson '710 has been overcome.

**C. Conclusion**

Appellant submits that independent claim 1 is patentable and that dependent claims 2-96 dependent from independent claim 1, or claims dependent therefrom, are patentable at least for the reasons set forth above and due to their dependency from an allowable independent claim, or claims dependent therefrom. Appellant respectfully requests the Board to reverse the Examiner's rejections and allow claims 1-96.



Application No. 10/669,287  
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To the extent any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this Appeal Brief, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. § 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 50-3726.

Respectfully submitted,  
MARTIN & FERRARO, LLP

Dated: December 4, 2007

By: 

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